



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,381	06/24/2003	Kenichi Hashizume	852.0028.U1(US)	4723
29683	7590	05/30/2007		
HARRINGTON & SMITH, PC 4 RESEARCH DRIVE SHELTON, CT 06484-6212			EXAMINER TALBOT, BRIAN K	
			ART UNIT	PAPER NUMBER
			1762	
			MAIL DATE	DELIVERY MODE
			05/30/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/606,381

**Applicant(s)**

HASHIZUME ET AL.

**Examiner**

Brian K. Talbot

**Art Unit**

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,6-19 and 42-50 is/are pending in the application.
- 4a) Of the above claim(s) 44-50 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,6-19 and 42-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/16/07 has been entered.
2. The amendment filed 3/16/07 has been considered and entered. Claims 3,5 and 20-41 have been canceled. Claims 44-50 have been added. Claims 1,2,4,6-19 and 43-50 remain in the application.

***Election/Restrictions***

3. Newly submitted claims 44-50 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:  
  
Claims 44-45, directed to an apparatus, class 118, subclass 46+.  
  
Claims 46-50, directed toward an article, class 428, subclass 209+.  
  
Newly cited invention is related as an apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as

Art Unit: 1762

claimed can be used to practice another and materially different process other than coating such as by etching.

Newly cited invention is related as product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product can be made by another and materially different process other than coating such as by lamination.

Newly cited inventions are related as apparatus and product made. The inventions in this relationship are distinct if either or both of the following can be shown: (1) that the apparatus as claimed is not an obvious apparatus for making the product and the apparatus can be used for making a materially different product or (2) that the product as claimed can be made by another and materially different apparatus (MPEP § 806.05(g)). In this case the product can be made by another and materially different process other than coating such as by lamination apparatus.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 44-50 have withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 4, the claim is improper as it is dependent upon a canceled claim 3. It appears that this was an oversight and should have been recited as claim 42. Clarification is requested.

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 103***

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 1762

7. Claims 1,2,4,6-19 and 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2003-008180 in combination with Tarponol et al. (3,772,075) further in combination with either Sturm et al. (3,791,872) or JP 09-059,778.

JP 2003-008180 teaches a three-dimensional circuit component for a mobile telephone having a circuit patterned formed on bonding film that is formed on a three-dimensional molding. JP 2003-008180 teaches a bonding film (3) containing a catalyst is formed on a three-dimensional molding (1). A circuit pattern (4) is formed on the bonding film by electroless plating.

JP 2003-008180 fails to teach applying the bonding/catalyst film prior to molding as opposed to after molding.

Tarponol et al. (3,772,075) discloses a method of forming a pattern on an article comprising the steps of applying a carrier material to a substrate to provide the pattern; the carrier material carrying a seeding substance to allow application of a metallic material thereto, molding the substrate to form the article and applying the metallic material to the seeding substance on the carrier material (column 3 lines 9-40, example 2).

Therefore it would have been obvious for one skilled in the art at the time the invention was made to have modified JP 2003-008180 process by alternating the molding and bonding/catalyst steps with the expectation of achieving similar success for producing a molded article having catalyst thereon for subsequent plating.

Referring to claim 2, Tarponol et al. (3,772,075) teaches the carrier material comprising an ink and it is applied to the substrate by screen printing (column 10 lines 21-28).

Art Unit: 1762

Referring to claim 4, Tarponol et al. (3,772,075) teaches the substrate sags upon heating, this acts to stretch the substrate, the binder material is a resinous oil it would inherently be capable of stretching to the same extent as the substrate as it is a liquid and can form the shape of its container (column 10 lines 5-20).

Referring to claim 6, Tarponol et al. (3,772,075) teaches the seeding substance comprises a plurality of metal particles in the carrier material (column 10 lines 5-20).

Referring to claim 9, Tarponol et al. (3,772,075) teaches the particles are present in a range of 10 % by weight or less (column 10 lines 5-20).

Referring to claim 10 and 11, Tarponol et al. (3,772,075) exemplifies particle weight percents in the range of 0.1 and 0.5 wt % (table 4).

Referring to claims 12-14, Tarponol et al. (3,772,075) discloses all of the features of these claims except it does not disclose the size of the particles it only discloses using a commercially available noble metal luster. However, the size of the particles determines the surface area of the particles per unit volume and smaller particles have more surface area per unit volume accordingly it would be desirable to use particles with high surface area per unit volume as there would be more active sites for seeding than with larger particles. Accordingly, the size of the particles it effects the amount of seeding material necessary. Therefore the size of the particles is a result effective parameter in that it effects the volume of seeding material necessary to form the coating. It would have been obvious to have adjusted the size of the particles to values in the claimed ranges through routine experimentation so as to minimize the volume of seeding material necessary, especially in the absence of a showing of a criticality for using values in the claimed ranges.

Art Unit: 1762

JP 2003-008180 in combination with Tarponol et al. (3,772,075) fail to teach the claimed binder for fixing the seeding substance to the substrate.

Sturm et al. (3,791,872) teaches a method of producing an electrode for electrochemical cells. The catalyst particles are supplied to the substrate with a binder of acrylonitrile-butadiene-styrene (abstract).

JP 09-059,778 teaches a pretreatment for electroless plating. A metallic catalyst is dispersed in a binder and applied to a substrate and then electroless plating is applied to the catalyzed substrate. The binder is disclosed as an acrylic or polyurethane (abstract).

Therefore it would have been obvious for one skilled in the art at the time the invention was made to have modified JP 2003-008180 in combination with Tarponol et al. (3,772,075) binder with the binders of either Sturm et al. (3,791,872) or JP 09-059,778 with the expectation of achieving similar success.

### ***Response to Amendment***

8. Applicant's arguments filed 3/16/07 have been fully considered but they are moot in view of the newly cited rejection.

Applicant argued that the rejection failed to teach the claimed binder as Tarponol et al. (3,772,075) only taught rosins as the binder material, i.e. pine oil or turpentine.

Sturm et al. (3,791,872) or JP 09-059,778 teaches this limitation as detailed above.



Art Unit: 1762

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K. Talbot whose telephone number is (571) 272-1428. The examiner can normally be reached on Monday-Friday 8AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

 5/24/07

Brian K Talbot  
Primary Examiner  
Art Unit 1762

BKT